WHAT IS CLAIMED IS:

1. An endothermic heat shield composition, comprising at least 50 wt/wt% hydrated salt and at least one filler material, wherein said salt is in the form of hydrated salt particles which are fused to each other, wherein said fused state is formed as a result of the heating of the hydrated salt to at least the temperature at which said salt is in liquid form and the subsequent cooling thereof.

2. An endothermic heat shield composition according to claim 1, wherein said hydrated salt is selected from the group consisting of $Al_2(SO_4)\cdot 16\text{-}18H_2O$; $NH_4Fe(SO_4)_2\cdot 12H_2O$; $Na_2B_4O_7\cdot 10H_2O$; $NaAl(SO_4)_2\cdot 12H_2O$; $AlNH_4(SO_4)_2\cdot 12\text{-}24H_2O$; $Na_2SO_4\cdot 10H_2O$; $MgSO_4\cdot 7H_2O$; $(NH_4)_2SO_4\cdot 12H_2O$; $KAl(SO_4)_2\cdot 12H_2O$; $Na_2SiO_3\cdot 9H_2O$; $Mg(NO_2)_2\cdot 6H_2O$; $NaNO_2$; $Na_2CO_3\cdot 7H_2O$; and mixtures thereof.

3. An endothermic heat shield composition according to claim 2, wherein at least 50% of said hydrated salt is hydrated aluminum sulfate.

4. An endothermic heat shield composition according to claim 1, wherein said filler material is a material selected from the group consisting of an organic component and an inorganic component and mixtures thereof.

5. An endothermic heat shield composition according to claim 4, wherein said organic component is a solid cellulose-based component.

6. An endothermic heat shield composition according to claim 5, wherein said solid cellulose-based component is selected from the group consisting of wood particles and paper particles.

7. An endothermic heat shield composition according to claim 5, wherein said solid cellulose-based component is present in an amount ranging from about 5 wt/wt% to 30 wt/wt%.

8. An endothermic heat shield composition according to claim 4, wherein said organic includes sugar molasses which is present in an amount of up to 20 wt/wt%.

9. An endothermic heat shield composition according to claim 4, wherein said inorganic component is selected from the group consisting of glass fibers and ceramic fibers which is present in an amount of up to 10 wt/wt%.

10. An endothermic heat shield composition according to claim 4, wherein said inorganic component is inert, highly porous and light weight.

11. An endothermic heat shield composition according to claim 4, wherein said inorganic component is selected from the group consisting of Vermiculite and Perlit and is present in an amount ranging from about 5 wt/wt% to 30 wt/wt%.

12. An endothermic heat shield composition according to claim 4, wherein inorganic component is present in an amount of up to 10 wt/wt% and it is selected from the group consisting of titanium dioxide, magnesium oxide, aluminum oxide, and mixtures thereof.

13. A method for preparing an endothermic heat shield composition, which comprises at least 50 wt/wt% hydrated salt and at least one filler material, said method comprising:

a) heating the hydrated salt to a temperature at which it liquifies;

b) adding at least one filler material; and

cooling the mixture to form a composition wherein the hydrated salt particles are fused to each other.

14. The method according to claim 13, wherein said hydrated salt is selected from the group consisting of $Al_2(SO_4)\cdot 16\text{-}18H_2O$; $NH_4Fe(SO_4)_2\cdot 12H_2O$; $Na_2B_4O_7\cdot 10H_2O$; $NaAl(SO_4)_2\cdot 12H_2O$; $AlNH_4(SO_4)_2\cdot 12\text{-}24H_2O$; $Na_2SO_4\cdot 10H_2O$; $MgSO_4\cdot 7H_2O$; $(NH_4)_2SO_4\cdot 12H_2O$; $KaI(SO_4)_2\cdot 12H_2O$; $Na_2SiO_3\cdot 9H_2O$; $Mg(NO_2)_2\cdot 6H_2O$; $NaNO_2$; $Na_2CO_3\cdot 7H_2O$; and mixtures thereof.

15. The method according to claim 13, wherein at least 50% of said salt is hydrate aluminum sulfate.

16. The method according to claim 13, wherein said filler material is a material selected from the group consisting of an organic component and an inorganic component and mixtures thereof.

17. The method according to claim 16, wherein said organic component is a solid cellulose-based component.

18. The method according to claim 17, wherein said solid cellulose-based component is selected from the group consisting of wood particles and paper particles.

19. The method according to claim 17, wherein said solid cellulose-based component is present in an amount ranging from about 5 wt/wt% to 30 wt/wt%.

20. A method according to claim 16 wherein said organic component includes sugar molasses which is present in an amount of up to 20 wt/wt%.

21. A method according to claim 16, wherein said inorganic component is selected from the group consisting of glass fibers and ceramic fibers which is present in an amount of up to 10 wt/wt%.

22. The method according to claim 16, wherein said inorganic component is inert, highly porous and light weight.

23. The method according to claim 16, wherein said inorganic component is selected from the group consisting of Vermiculite and Perlit and is present in an amount ranging from about 5 wt/wt% to 30 wt/wt%.

24. The method according to claim 13, further comprising the step of adding up to 10 wt/wt% water to the hydrated salt prior to heating.

25. The method according to claim 16, wherein inorganic component is present in an amount of up to 10 wt/wt% and it is selected from the group consisting of titanium dioxide, magnesium oxide, aluminum oxide, and mixtures thereof.

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